

111TH CONGRESS
1ST SESSION

H. R. 3165

To provide for a program of wind energy research, development, and demonstration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 9, 2009

Mr. TONKO introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To provide for a program of wind energy research, development, and demonstration, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Wind Energy Research
5 and Development Act of 2009”.

6 **SEC. 2. WIND ENERGY RESEARCH AND DEVELOPMENT PRO-**
7 **GRAM.**

8 (a) IN GENERAL.—The Secretary of Energy shall
9 carry out a program of research and development to—

1 (1) improve the energy efficiency, reliability,
2 and capacity of wind turbines;

3 (2) optimize the design and adaptability of wind
4 energy systems to the broadest practical range of at-
5 mospheric conditions; and

6 (3) reduce the cost of construction, generation,
7 and maintenance of wind energy systems.

8 (b) PROGRAM.—The program under this section shall
9 focus on research and development of—

10 (1) new materials and designs to make larger,
11 lighter, less expensive, and more reliable rotor
12 blades;

13 (2) technologies to improve gearbox perform-
14 ance and reliability;

15 (3) automation, materials, and assembly of
16 large-scale components to reduce manufacturing
17 costs;

18 (4) low-cost transportable towers greater than
19 100 meters in height to capitalize on improved wind
20 conditions at higher elevations;

21 (5) advanced computational modeling tools to
22 improve—

23 (A) the reliability of aeroelastic simulations
24 of wind energy systems; and

1 (B) understanding of the interaction be-
2 tween each wind turbine component;

3 (6) advanced control systems and blade sensors
4 to improve performance and reliability under a wide
5 variety of wind conditions;

6 (7) advanced generators, including—

7 (A) medium-speed and low-speed genera-
8 tors;

9 (B) direct-drive technology; and

10 (C) the use of advanced magnets in gener-
11 ator rotors;

12 (8) wind technology for offshore applications;

13 (9) methods to assess and mitigate the effects
14 of wind energy systems on radar and electro-
15 magnetic fields; and

16 (10) wind turbines with a maximum electric
17 power production capacity of 100 kilowatts or less.

18 **SEC. 3. WIND ENERGY DEMONSTRATION PROGRAM.**

19 (a) IN GENERAL.—The Secretary of Energy shall
20 conduct a wind energy demonstration program. In car-
21 rying out this section, the Secretary shall ensure that—

22 (1) the program is of sufficient size to measure
23 wind energy system performance under the full pro-
24 ductive range of wind conditions in the United
25 States;

1 (2) demonstration projects carried out under
2 this program are conducted in collaboration with in-
3 dustry; and

4 (3) data collected from demonstration projects
5 carried out under this program is useful for carrying
6 out section 2(b).

7 (b) COST-SHARING.—The Secretary shall carry out
8 the program under this section in compliance with section
9 988(a) through (d) and section 989 of the Energy Policy
10 Act of 2005 (42 U.S.C. 16352(a) through (d) and 16353).

11 **SEC. 4. AUTHORIZATION OF APPROPRIATIONS.**

12 There are authorized to be appropriated to the Sec-
13 retary of Energy to carry out this Act \$200,000,000 for
14 each of the fiscal years 2010 through 2014.

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